

## CLAIMS

1. A rotation driving apparatus having a motor at least rotating at a high speed and a low speed, a torque generating circuit for generating a torque of the motor by a supply voltage from a power source, a motor control circuit for controlling rotation of the motor, rotation detector for detecting a rotating speed of the motor and transmitting a detection signal to the motor control circuit and controller for delivering the rotating speed of the motor and a number of revolutions thereof to and from the motor control circuit, wherein

the torque generating circuit includes voltage detector for detecting a level of the supply voltage and a period of voltage drop, the voltage detector transmitting a voltage-drop information to the controller,

the controller memorizes a power-recovery information having a voltage drop and a period thereof under an instantaneous blackout recoverable within a predetermined period and a rotation-control pattern information of the motor corresponding to the power-recovery information, in advance, and

the controller controls the rotation of the motor upon comparing the voltage-drop information, the power-recovery information and the rotation-control pattern information of the motor with each other.

2. The rotation driving apparatus as claimed in Claim 1, wherein when the voltage detector detects a voltage drop during the accelerating rotation of the motor, the controller outputs control signals of decelerating rotation of the motor and subsequently rotating the motor at a constant speed.

3. The rotation driving apparatus as claimed in Claim 1, setting up a rotation-control pattern of the motor having ranges of an accelerating rotation, a constant high-speed rotation and a decelerating rotation, wherein when the

voltage detector detects a voltage drop during the accelerating rotation of the motor, the controller outputs control signals of: decelerating rotation of the motor; next rotating the motor at a constant speed; and after the power recovery, accelerating rotation of the motor.

4. The rotation driving apparatus as claimed in Claim 1, setting up a rotation-control pattern of the motor having ranges of an accelerating rotation, a constant high-speed rotation and a decelerating rotation, wherein when the voltage detector detects a voltage drop during the accelerating rotation of the motor, the control means outputs control signals of: decelerating rotation of the motor; next rotating the motor at a constant speed; and after the power recovery, compensating the accelerating rotation of the motor at the voltage drop.

5. The rotation driving apparatus as claimed in Claim 4, wherein the accelerating rotation of the motor after the power recovery is carried out by increasing an acceleration rate of the accelerating rotation of the motor in the rotation-control pattern toward a finish time of the accelerating rotation of the motor in the set up rotation-control pattern.

6. The rotation driving apparatus as claimed in Claim 4, wherein

it is set up that the accelerating rotation of the motor after the power recovery conforms to the accelerating rotation of the motor of the set up rotation-control pattern and that a period of the constant high-speed rotation of the motor is equal to a period of the constant high-speed rotation of the motor in the set up rotation-control pattern, and

a deceleration rate of the decelerating rotation of the motor is increased so that a finish time of the decelerating

rotation of the motor coincides with a finish time of the decelerating rotation of the motor in the set up rotation-control pattern.

7. The rotation driving apparatus as claimed in Claim 4, wherein

the accelerating rotation of the motor after the power recovery is maintained to a higher speed than a speed of the constant high-speed rotation of the motor in the set up rotation-control pattern, and

after rotating the motor at the higher speed, the motor is decelerated so as to coincide with a finish time of the decelerating rotation of the motor in the set up rotation-control pattern.

8. The rotation driving apparatus as claimed in Claim 1, wherein when the voltage detector detects a voltage drop during the accelerating rotation of the motor, the control means outputs control signals of: decelerating rotation of the motor; next rotating the motor at a constant speed; and stopping rotation of the motor if time has passed a period of the instantaneous blackout.

9. A rotation driving apparatus having a motor at least rotating at a high speed and a low speed, a torque generating circuit for generating a torque of the motor by a supply voltage from a power source, a motor control circuit for controlling rotation of the motor, rotation detector for detecting a rotating speed of the motor and transmitting a detection signal to the motor control circuit and controller for delivering the rotating speed of the motor and a number of revolutions thereof to and from the motor control circuit, wherein

the torque generating circuit includes voltage detector for detecting a level of the supply voltage and a period of voltage drop, the voltage detector directly transmitting a

voltage-drop information to the motor control circuit,  
the motor control circuit memorizes a power-recovery information having a voltage drop and a period thereof under an instantaneous blackout recoverable within a predetermined period,

the controller memorizes a rotation-control pattern information of the motor corresponding to the power-recovery information, the rotation-control pattern information being transmitted to the motor control circuit in advance, and

the motor control circuit controls the rotation of the motor upon comparing the voltage-drop information, the power-recovery information and the rotation-control pattern information of the motor with each other.

10. A rotation driving method for a rotation driving apparatus having a motor at least rotating at a high speed and a low speed, a torque generating circuit for generating a torque of the motor by a supply voltage from a power source, and voltage detector arranged in the torque generating circuit to detect a level of the supply voltage and a period of a voltage drop, comprising the steps of:

memorizing a power-recovery information having the voltage drop and the period of the voltage drop under an instantaneous blackout recoverable within a predetermined period and a rotation-control pattern information of the motor corresponding to the power-recovery information, in advance; and

getting a voltage-drop information detected by the voltage detector and further controlling the rotation of the motor upon comparing the voltage-drop information, the power-recovery information and the rotation-control pattern information of the motor with each other.

11. The rotation driving method as claimed in Claim 10, wherein the step of comparing the voltage-drop information,

the power-recovery information and the rotation-control pattern information of the motor with each other, is carried out by controller configured to give and receive both a rotating speed of the motor and number of revolutions thereof to and from motor control circuit for controlling the motor through the torque generating circuit.

12. The rotation driving method as claimed in Claim 10, wherein the step of comparing the voltage-drop information, the power-recovery information and the rotation-control pattern information of the motor with each other, is carried out by motor control circuit for controlling the motor through the torque generating circuit.